



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0438; Product Identifier 2017-SW-062-AD; Amendment 39-19410; AD 2018-19-10]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Airbus Helicopters Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters. This AD requires measuring a vibration level in the tail rotor (T/R) drive. This AD was prompted by reports of bearing degradation. The actions of this AD are intended to prevent an unsafe condition on these helicopters.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at http://www.helicopters.airbus.com/website/en/ref/Technical-Support_73.html. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0438; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the European Aviation Safety Agency (EASA) AD, the economic evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Rao Edupuganti, Aviation Safety Engineer, Regulations and Policy Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email rao.edupuganti@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On May 17, 2018, at 83 FR 22886, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 by adding an AD that would apply to Airbus Helicopters Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters. The NPRM proposed to require measuring the T/R drive vibration level without balancing, cleaning the fan, and repeating the vibration level measurement. If the difference between the two amplitude values is greater than 0.75 inch per second (ips), the NPRM proposed to require replacing each T/R fan bearing. The proposed requirements were intended to prevent degradation of the main gearbox (MGB)

oil cooler fan bearing (bearing), which could result in loss of MGB and engine oil cooling function, loss of the rear transmission, and subsequent loss of control of the helicopter.

The NPRM was prompted by AD No. 2017-0159, dated August 25, 2017, issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Airbus Helicopters Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters. EASA advises of two occurrences on Model AS355 military helicopters in which the MGB bearing installed on the T/R drive shaft experienced significant degradation. EASA states that while investigation has not determined the cause of the failures, this condition may also occur on other Model AS355 helicopters due to design commonality. According to EASA, this condition, if not detected and corrected, could result in loss of MGB and engine oil cooling function, loss of the rear transmission, and subsequent loss of control of the helicopter. To address this unsafe condition and as an interim measure, the EASA AD requires two vibration level measurements of the forward portion of the tail rotor drive line, one before and one after cleaning the MGB oil cooler fan, and replacing the bearings if excessive level or level trends are detected. The EASA AD also specifies that after the effective date of the AD, only those MGB oil cooler fan assembly bearings that are new or that have passed the vibration level measurements may be installed.

Comments

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

FAA's Determination

These helicopters have been approved by the aviation authority of France and are approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of the same type design and that air safety and the public interest require adopting the AD requirements as proposed.

Interim Action

We consider this AD to be an interim action. The manufacturer is currently developing a terminating action for the unsafe condition described in this AD. If a terminating action is identified, we may consider further rulemaking then.

Related Service Information

Airbus Helicopters has issued Alert Service Bulletin No. AS355-05.00.77, Revision 0, dated July 3, 2017, which contains procedures for checking the condition of the fan assembly bearings by measuring the vibration levels of the first section of the T/R drive.

Costs of Compliance

We estimate that this AD affects 104 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD.

At an average labor rate of \$85 per work-hour, measuring the vibration levels requires about 5 work-hours, for a cost of \$425 per helicopter and \$44,200 for the U.S.

fleet. If required, replacing both fan assembly bearings requires about 8 work-hours, and required parts cost \$1,064, for a cost of \$1,744 per helicopter.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2018-19-10 **Airbus Helicopters:** Amendment 39-19410; Docket No. FAA-2018-0438; Product Identifier 2017-SW-062-AD.

(a) Applicability

This AD applies to Airbus Helicopters Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as degradation of a main gearbox (MGB) oil cooler fan assembly bearing. This condition could result in loss of MGB and engine oil cooling function, loss of the rear transmission, and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(d) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

(1) Within 165 hours time-in-service (TIS):

(i) Measure the tail rotor (T/R) drive vibration level without balancing the T/R drive, and record the amplitude value.

(ii) Clean the oil cooler fan.

(iii) Measure the T/R drive vibration level without balancing the T/R drive, and record the amplitude value.

(iv) Calculate the difference between the two amplitude values. If the difference is greater than 0.75 inch per second (ips), before further flight, replace each oil cooler fan assembly bearing.

(2) After the effective date of this AD, do not install an oil cooler fan assembly bearing with more than 0 hours TIS unless the requirements of this AD have been accomplished.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Section, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Rao Edupuganti, Aviation Safety Engineer, Regulations and Policy Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

(g) Additional Information

(1) Airbus Helicopters Alert Service Bulletin No. AS355-05.00.77, Revision 0, dated July 3, 2017, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at http://www.helicopters.airbus.com/website/en/ref/Technical-Support_73.html. You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

(2) The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2017-0159, dated August 25, 2017. You may view the EASA AD on the Internet at <http://www.regulations.gov> in Docket No. FAA-2018-0438.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 6510, Tail Rotor Driveshaft.

Issued in Fort Worth, Texas, on September 12, 2018.

Scott A. Horn,

Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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